

MAS DRD – DOUBLE ROTOR DISC

Efficient drying & cleaning of plastics

The Drying and Cleaning of shredded or granulated plastics happens in the patented DRD System without the use of water!

During the process the material is held in suspension inside the DRD drum and is dried by a continuous warm air stream through the machine. This turbulent current ensures efficient moisture removal and simultaneously liberates the contaminants like sand, dust, soil and moisture, which are carried away with air stream through separation screens. In a downstream installed secondary cleaning step, (DS) still remaining fine dust particles are removed. Both cleaning stages run simultaneously in a well coordinated automatic process.

MAS drying and cleaning systems are controlled through an intuitive and simple SPS system. Power requirements and residence time can be precisely adjusted to the moisture content and degree of contamination of the input material. With fluctuating moisture levels of the input material, the process can be stabilized using sensors giving feedback to an automatic control loop.

By means of the combination of Re-pelletizing and the DRD process, as well as by using existing energy sources, (like hot water, hot air, Gas heating systems) particularly efficient energy consumption [kWh/kg] can get achieved.



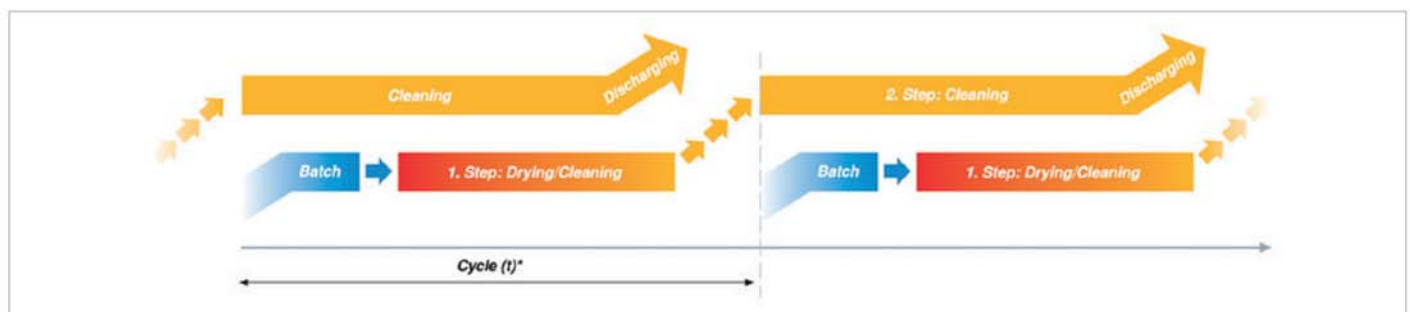
DRD 26-DS (depiction)

DRD DRY-CLEANING STANDS FOR

- efficient removal of dust, sand, soil and moisture
- no extensive process water treatment required
- no sludge that need to be disposed of
- easy and intuitive controls allow fully automatic operation
- significant lower production costs in comparison to a water

DRD DOWNSTREAM OF A WATER WASH PROCESS: DRYING WITH ADDITIONAL BENEFIT

- additional secondary cleaning simultaneously to the drying process
- longer life time of filter screens
- longer life cycle of screws and barrels for the extrusion system
- stable extrusion process because of low and constant moisture content



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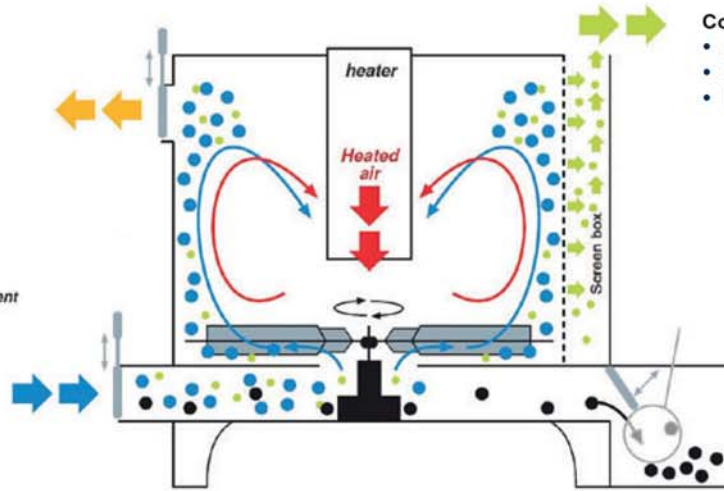
Output material

- Moisture content < 2 %
- Contamination < 0,5 %



Input material

- Plastics rigid/film
- Contamination (sand, dust, soil, moisture) up to max. 25 %



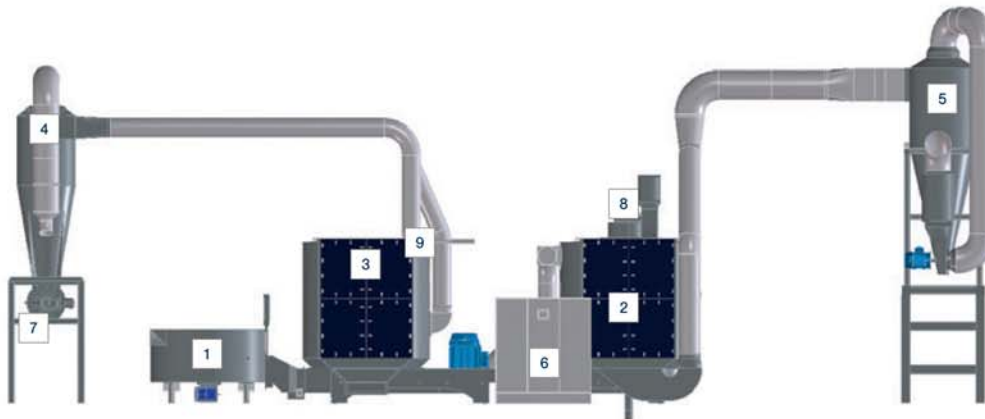
Contamination discharge

- Air
- Sand, dust, soil
- Moisture

Heavy parts separation

- Small stones
- Wires, fe-parts, etc.
- ...

DRD processing principle (schematic drawing)



- 1 Buffer silo
- 2 Cleaning step 1
- 3 Cleaning step 2
- 4 Material cyclone
- 5 Dust Cyclone
- 6 Electric cabinet
- 7 Rotary Valve
- 8 Heating unit
- 9 Blower

DRD 26-DS (schematic drawing)



DRD 26-DS filtration screen (depiction)

DRD DRYING & CLEANING

Type	Throughput
DRD 21-DS	500–800 kg/h
DRD 26-DS	1,200–1,600 kg/h

DRD DRYING

Type	Throughput
DRD 21	500–800 kg/h
DRD 26	1,200–1,600 kg/h